7 Troubleshooting

7.1.0 Error Messages and Handling

7.1.1 Main Shaft Motor and Others

No.	Error Name	Error Description	Correction
100	Main shaft motor stop position error	When it is stopped, the main shaft' s angle is not 100 °	Use the lever to set the main shaft' s angle at 100 ° .
101	Main shaft motor driver error	Main shaft motor driver develops an error.	Turn off and on the main switch.
102	Main shaft motor overload error	When a thread tangles the hook, when the needle bar' s control body is bad, and when the thread becomes tangled during trimming, the error occurs.	Check the hook of the front head, and turn off and on the main switch.
103	No trimming system recovery	When the trimming sensor is not recovered upon trimming.	Check and respond to the abnormality of the trimming system.
104	Start switch error	When the power is on, the start button is pressed.	Check whether the start button contacts the connector.
105	Stop switch error	When the power is on, the stop button is pressed.	Check whether the stop button contacts the connector.
107	Valve error	When the valve is opened.	
108	Air pressure error	When the air pressure is below the standard (Sequin)	
109	Pulley ratio error	When the set pulley ratio is wrong	Change the driver setting after checking the main shaft pulley ratio.
110	AC Line error	When a problem occurs on the joint board.	Replace the joint board

7.1.2 X, Y Motor-related Errors

No.	Error Name	Error Description	Correction
200	(+ X) frame limit detection	The frame feed system reaches the +X limit.	Move the frame in the -X direction.
201	(− X) frame limit detection	The frame feed system reaches the -X limit.	Move the frame in the +X direction.
202	(+ Y) frame limit detection	The frame feed system reaches the +Y limit.	Move the frame in the -Y direction.
203	(− Y) frame limit detection	The frame feed system reaches the -Y limit.	Move the frame in the +Y direction.
204	X-axis driver error	Problems occur in the X-axis driver.	Turn off and on the main switch.
205	Y-axis driver error	Problems occur in the Y-axis driver.	Turn off and on the main switch.
206	Wiper return error	Wiper solenoid does not return.	Repairs the wiper mechanism.
207	Trimmer return error	Trimmer motor does not return.	Repair the trimmer mechanism.

7.1.3 Color Change

No.	Error Name	Error Description	Correction
300	Needle bar stop position error	When replacing the needle bar, the needle bar fails to reach the proper position.	Manually turns the needle bar to check the load of the needle bar, and place the needle bar at the stop position.

7.1.4 Encoder

No.	Error Name	Error Description	Correction
400	Error in the main shaft encoder A	Problems in signaling occurred in the main shaft' s encoder A.	Check the connection of the encoder cable, and turn off and then on the main switch.
401	Error in the main shaft encoder Z	Problems in signaling occurred in the main shaft' s encoder Z.	Check the encoder' s cable connection, and turn off and again the main switch.

7.1.5 Consecutive Work

No.	Error Name	Error Description	Correction
501	Error in consecutive work setting	As in (X-axis number) × (Y-axis number) 〉 99, the limit of consecutive work was passed.	Make sure that consecutive work should be set as (X-axis number) × (Y-axis number) 〈 99.

7.1.6 Floppy Diskette and Communications

No.	Error Name	Error Description	Correction
600	No diskette.	There is no diskette inside the FDD.	Insert a diskette into the FDD.
601	No sectors on the diskette	A floppy diskette is not formatted or the format is different.	Format a diskette or replace it with other diskette.
602	No design data in the diskette	There is no embroidery design saved in a floppy diskette.	Replace the diskette.
603	Remove the write protect tap.	When copying embroidery designs, the diskette write protect tap is enabled.	Disable the write protect tap.
604	Diskette damaged	A floppy diskette is damaged.	Format a diskette or replace it.
605	Insufficient memory capacity	There is unoccupied space for copying in a floppy diskette.	Replace the diskette with a new one.
606	Diskette removed from FDD	A floppy diskette is removed in the middle of FDD operation.	Insert the diskette and start are work again.
607	Bad sector error during floppy reading	The floppy diskette' s sector is bad.	Format the diskette or replace it.
608	Bad sector error during floppy writing	The floppy diskette' s sector is bad.	Format the diskette or replace it.
609	Diskette error whose cause is unknown	Errors are developed whose cause is unknown while the floppy diskette is in operation.	Format the diskette or replace it with another one.
610	Diskette error	Errors are developed whose cause is unknown, while the floppy diskette is in operation.	Format the diskette or replace it with another one.
611	ZSK design error		
612	BARUDAN design error		
613	Bad sector error		
614	Operating program install error	When the operating program is installed, the operating program file name does not match or does not exist.	
630	Error found in the read data	The data read through the tape reader develops errors.	Enter data through the tape reader again.
640	Network device error	The network devices are not connected.	Check the status of the network devices.
650	USB error	The USB driver is not ready	Check whether the memory system of the USB memory is FAT16.

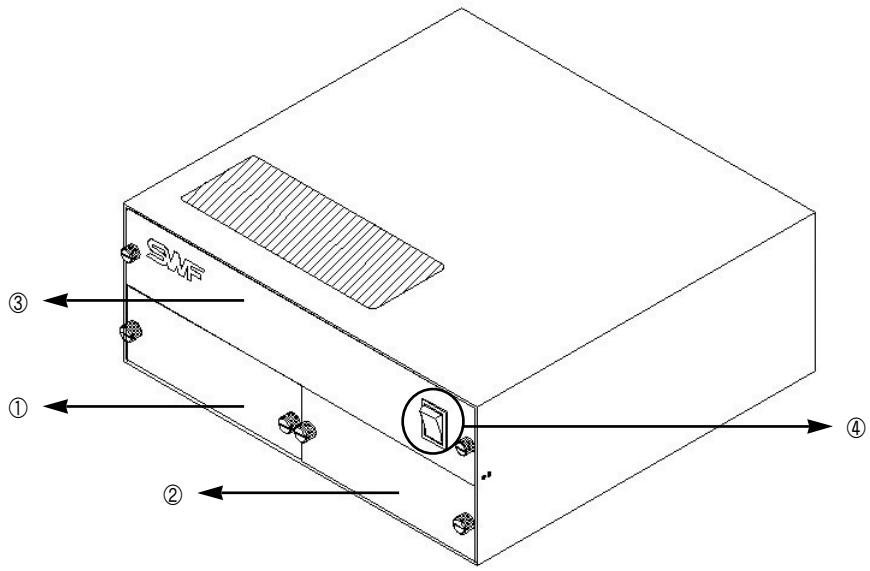
7.1.7 Memory

No.	Error Name	Error Description	Correction
700	No embroidery data found in the memory	The embroidery data does not exist in the memory.	Use a floppy diskette or a USB to save embroidery data.
701	Insufficient memory capacity	The data desired to copy in the memory failed to be copied due to the lack of memory capacity.	Delete unnecessary data.
702	100 memory rooms are full.	The 100 memory rooms are all saved with designs.	Delete unnecessary data.
703	Error in design memory system	Errors have occurred during copying or deleting data between memory devices.	Press Reset or turn off and on the main switch.
704	Bad memory battery	The battery is exhausted when the power is off. The status of saving the number of stitches and the x, y position information is unstable.	Call the A/S center at the nearest to your place and replace the battery. If this error frequently occurs, need to replace the CPU board.
801	Sequin design error	There is an error in the sequin design.	Amend the design.
901	MC1 communications error	The CAN communications do not regularly occur.	Check the cable and turn off and on the power.
902	MC2 communications error	When the CAN communications do not regularly occur.	Check the cable and turn off and on the power.

7.2.0 Machine Setting

7.2.1 Control Box Front

<Fig. 7.2.1-1> shows the front-side look of the control box.



[Fig. 7.2.1-1]

① Main Driver Rack

② I/O Board , XY Driver Rack

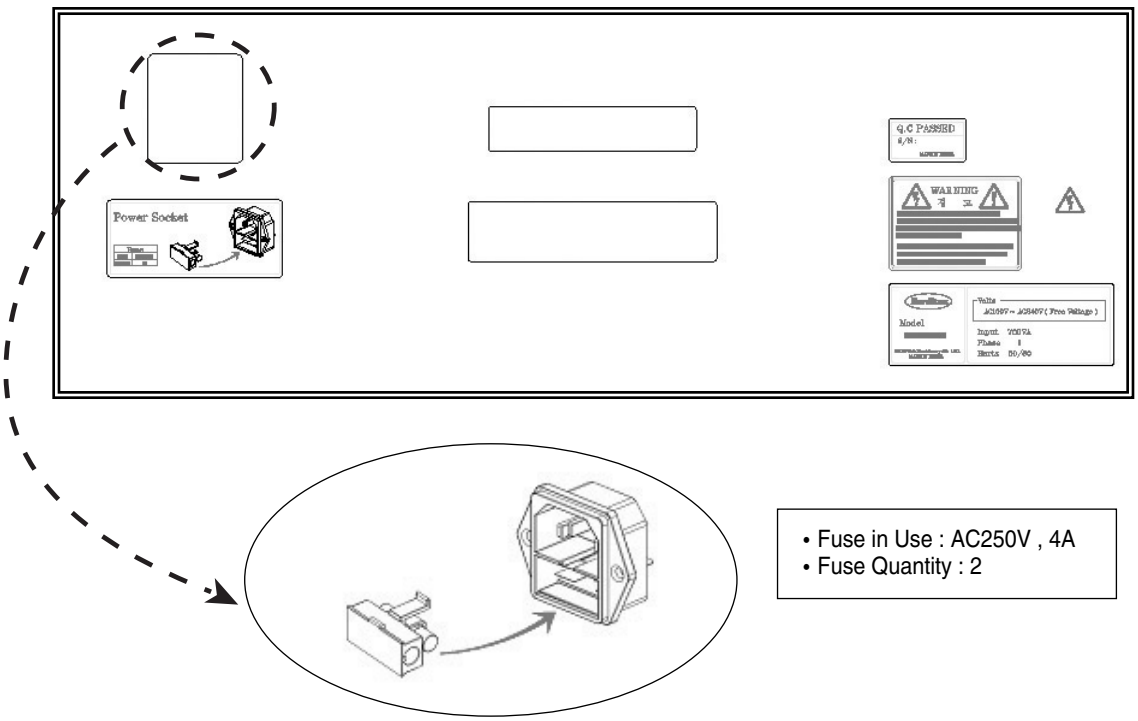
③ Power Rack

④ Main Switch

7.2.2 Fuse Install and Replace

Insert the power plug of the embroidery machine. If power remains off when pressing the power switch, take actions following the below direction. Check the fuse location as in <Fig. 7.2.2-1> and replace the fuse with a new one.

<Control Box Rear Side>



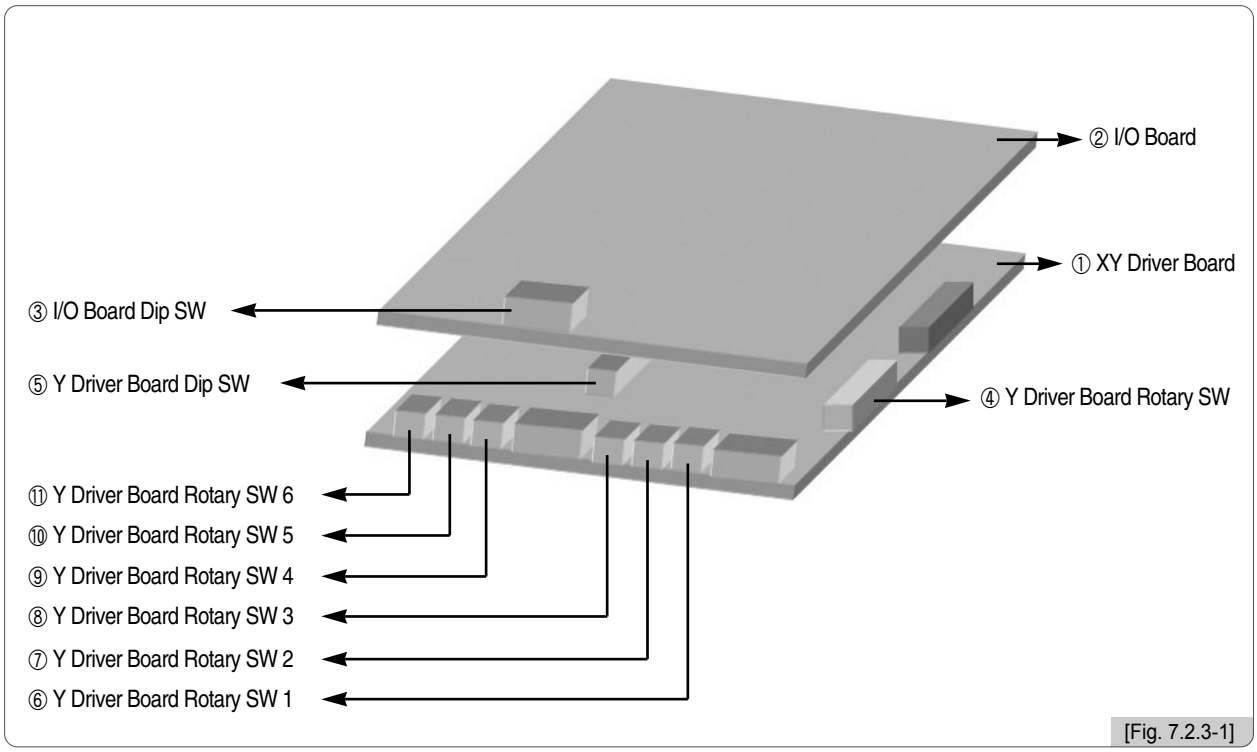
- Fuse in Use : AC250V , 4A
- Fuse Quantity : 2

[Fig. 7.2.2-1]

Although the power switch is off, there still exists the risk of being electrified. Make sure that the power cord is plugged off before staring embroidery work.

7.2.3 I/O Board , X/Y Driver Board Dip Switch Setting

<Fig. 7.2.2-1> shows I/O and XY Driver Board. The position of the board can be checked in "7.2.1 Control Box Front Side".

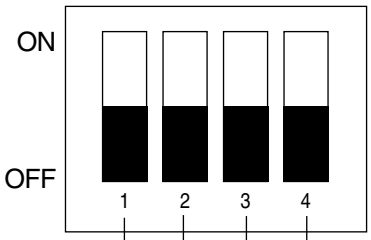

② I/O Board
① XY Driver Board
③ I/O Board Dip SW
⑤ Y Driver Board Dip SW
④ Y Driver Board Rotary SW
⑪ Y Driver Board Rotary SW 6
⑩ Y Driver Board Rotary SW 5
⑨ Y Driver Board Rotary SW 4
⑧ Y Driver Board Rotary SW 3
⑦ Y Driver Board Rotary SW 2
⑥ Y Driver Board Rotary SW 1

[Fig. 7.2.3-1]

① XY Driver Board

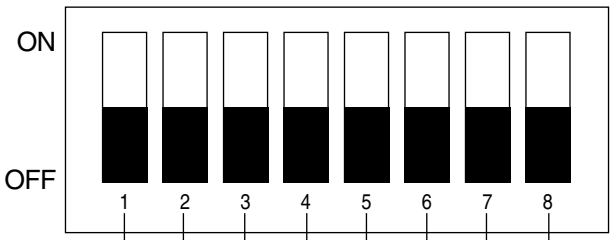
② I/O Board

③ I/O Board Dip Switch Setting



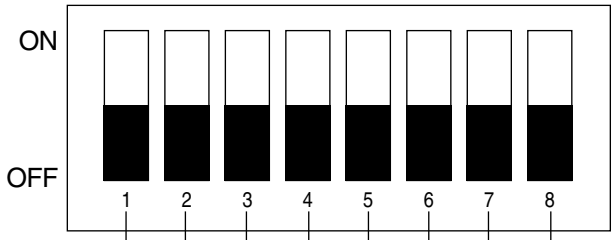
Function	OFF	ON
CAN I/D Setting	○	—
Reserved	—	—
Reserved	—	—
Reserved	—	—

④ X Driver Board Dip Switch Setting



Function	OFF	ON
Reserved	—	—
Reserved	—	—
Reserved	—	—
Reserved	—	—
Reserved	—	—
Motor Setting	X motor	Y motor
SELFTEST MODE	Unused	Used
M/C Choice	Upgrade Compact	—

⑤ Y Driver Board Dip Switch Setting



Function	OFF	ON
Reserved	—	—
Reserved	—	—
Reserved	—	—
Reserved	—	—
Reserved	—	—
Motor setting	X motor	Y motor
SELFTEST MODE	Unused	Used
M/C Choice	Upgrade Compact	—

According to machine type, select Dip Switch No. 1 (For the current machine type, select "Off".)

⑥ Rotary Switch 1
- Default - "0"
- Offset for X-Driver D gain OFFSET (D gain while dual gain is applied).

⑦ Rotary Switch 2
- Default -"0"
- Offset for X-Driver I gain (I gain while dual gain is applied).

⑧ Rotary Switch 3
- Default -"0"
- Offset for X-Driver P gain (P gain while dual gain is applied)

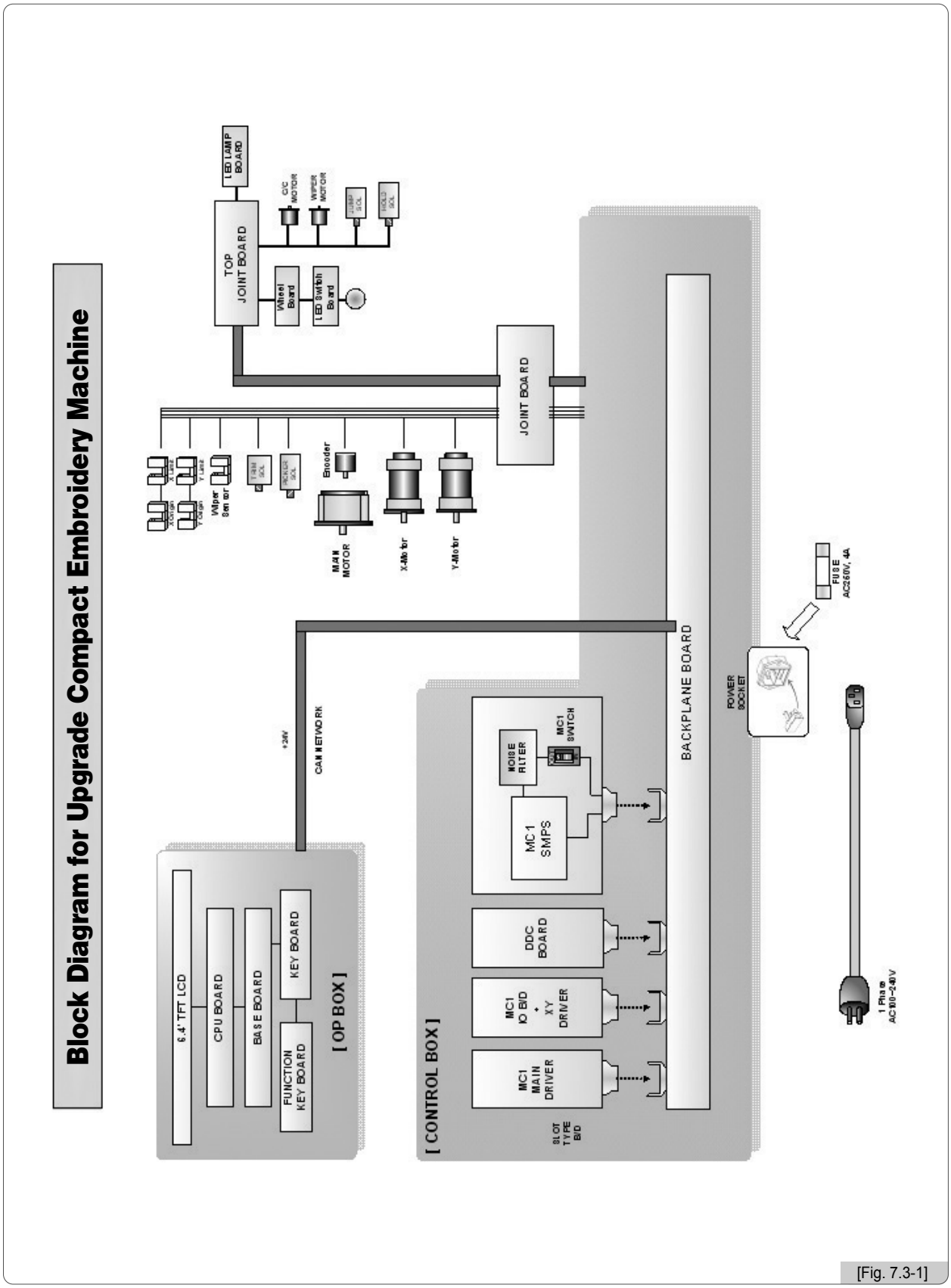
⑨ Rotary Switch 4
- Default - "0"
- Offset for Y-Driver D gain (D gain while dual gain is applied)

⑩ Rotary Switch 5
- Default - "0"
- Offset for Y-Driver I gain (I gain while dual gain is applied)

⑪ Rotary Switch 6
- Default - "0"
- Offset for Y-Driver P gain (P gain while dual gain is applied)

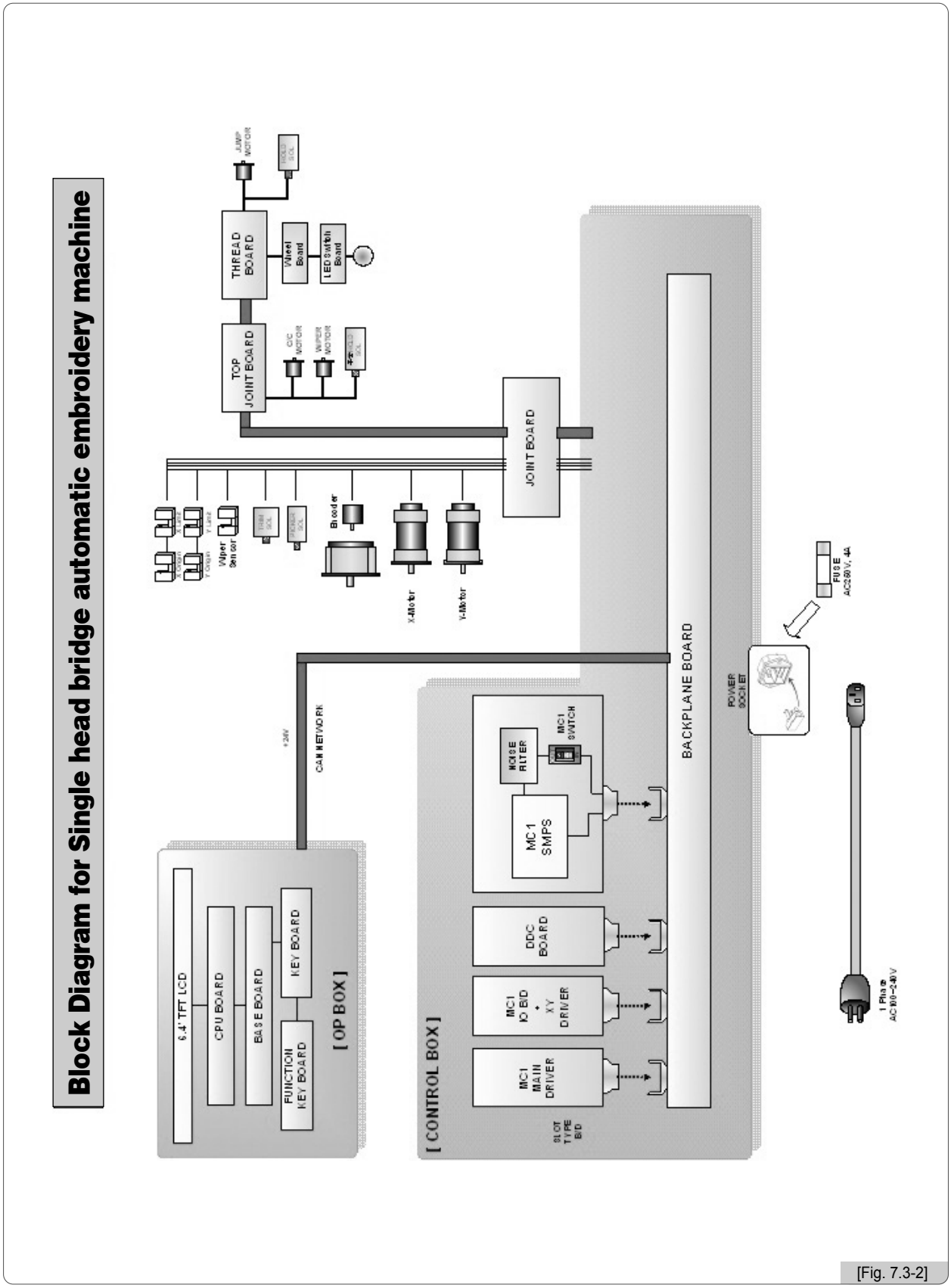
7.3 System Block Diagram

※ New Compact-type Automatic Embroidery Machine



[Fig. 7.3-1]

※ **Single head bridge automatic embroidery machine**



[Fig. 7.3-2]